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09/811,236	03/16/2001	William Michael Zintel	MS1-740US	3127

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EXAMINER

PRIETO, BEATRIZ

ART UNIT PAPER NUMBER

2142

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/811,236

Applicant(s)

ZINTEL ET AL

Examiner

Prieto Beatriz

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-34, 36-55 and 57-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-34, 36-55, and 57-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____



DETAILED ACTION

1. This communication is in response to Amendment filed 08/19/04, claims 25, 28, 32-33, 38, 40-41, 51-54, have been amended, claims 1-24, 35 and 56 have been canceled, and claims 58-62 have been added. Claims 25-34, 36-55, and 57-62 have been examined as hereby set forth.

2. Quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action may be found in previous office action.

3. Claims 25-34, 36-55, and 57-62 are rejected under 35 U.S.C. 102(e) as being anticipated by Humpleman et. al. U.S. Patent N. 6,546,419 B1 (referred to as Humpleman hereafter).

Regarding claim 25, Humpleman teaches substantial features of the invention as claimed, teaches a method comprising:

creating a definition of a controlled device using an XML-based language (Humpleman: created XML based XCE definition of CE devices see col 12/lines 35-54, said definition describes device, col 12/lines 46-54, said definition for controlling said controlled device see col 14/lines 6-19);

storing the definition on a computer-readable medium (Humpleman: each device has definition stored therein see col 15/lines 39-45, 55-60, database termed XCE definition, i.e. computer readable medium see col 12/lines 35-54, or stored in a library universally accessible see col 20/lines 31-45, stored at searchable library, i.e. computer readable medium see col 16/lines 38-50),

wherein the definition includes a service control protocol definition describing a protocol based message exchange (Humpleman describes a document definition INTERFACE-A.XML used to determine how to communicate with a device for service by defining the message format for the service, col 13/line 1-8, and describing the services available, col 13/46-56, an XML protocol communication stack at the API level on each device is used for sending (68) and receiving (70) messages over the network, the XCE definition and the XML definition of a method call, namely called the document type definition CALL.DTD and document type definition INTERFACE.DTD. are used to create the communication stack (68 & 70 respectively) col 15/lines 8-27, the document definition CALL.DTD which describes interaction with the controlled device on the network (col 13/lines 9-17), including a rule set for generating method call or function call message (i.e. protocol), such as XML Remote Procedure Call (RPC) or XMLRPC messages, col 13/lines 46-56).

Regarding claim 26, the storing comprises storing the definition on a computer-readable medium resident at the controlled device (Humbleman: each device includes a local definition software see col 15/line 39-49, i.e. “stored on a computer-readable medium”).

Regarding claim 27, storing the definition on a computer-readable medium located remotely from the controlled device (Humbleman: stored on another device, Hub or library searchable over the Internet see col 16/lines 39-58, or distributed, i.e. remotely from device see col 17/lines 20-25).

Regarding claim 28, generating a control message from the controlled device, the controlled message being generated in accordance with the definition (Humbleman: create command by examining the document definition retrieved from controlled device see col 14/lines 20-28, 35-38, generate commands using controlled device interface, i.e. XML document definition see col 18/lines 3-17, allows the generation of commands as specified by the definition for controlling the device see col 21/lines 46-col 22/lines 17).

Regarding claim 29, wherein the creating comprises:

creating a device portion of the definition that defines attributes of the controlled device (Humbleman: XML based definition includes information that defines capabilities and attributes of the device, i.e. “device portion” see col 21/lines 47-62); and

creating a service portion of the definition that defines one or more services exposed by the device (Humbleman: definition describes the object/methods supported by the service provided by the device, i.e. “service portion” see col 12/lines 45-54, definition provides full description of the services provided by the device see col 24/lines 40-42).

Regarding claim 30, storing the device portion on a first computer-readable medium resident at the controlled device (Humbleman: each device has definition stored locally therein see col 15/lines 44-49, controlled and controlling device store therein a XML base definition see col 19/lines 51-58, definition includes a device portion, e.g. defines the method of the device see col 12/lines 35-45 or device capabilities see col 21/lines 47-62); and

storing the service portion on a second computer-readable medium located remotely from the controlled device, but accessible over a network (Humbleman: each device has definition stored accessible over the network at a library 106 see col 20/lines 31-45, searchable library or over the Internet

col 16/lines 38-58, retrievable over the network see col 15/lines 31-38, service portion included see col 13/lines 46-56).

Regarding claim 31, further comprising making both the device portion and the service portion available at runtime over a network (Humbleman: interface definition including device description see col 21/lines 47-62 and service description see col 13/lines 46-56 where said definition is available at runtime see col 19/lines 51-58).

Regarding claim 32, storing a definition of the computing device, the definition being written is using an XML-based language (Humbleman: XML based interface definition col 12/lines 35-54, storing locally at each device see col 15/lines 44-49, stored locally or remotely retrieved see col 15/lines 63-col 16/line 8);

wherein the definition defines (set of instruction) protocol bases messages that describe services (Humbleman: INTERFACE.XML having definitions XCE & INTERFACE.DTD. which describe the services provided by the device, col 12/lines 46-54 and the message for communicating with said services, col 13/lines 1-8, 46-56, the XML based definitions including XML protocol based message call definitions for sending and receiving messages col 15, lines 8-27), and

making the definition available to other computing devices on the network (Humbleman: available for other devices see col 15/lines 33-38, accessible library see col 20/lines 31-45).

Regarding claim 33, a first set of XML-based code strings that define attributes of the device (Humbleman: XML based definition includes information that defines capabilities and attributes see col 21/lines 46-62); and

a second set of XML-based code string that define the service(s) exposed by the device (Humbleman: definition describes the object/methods supported by the service applications residing on the device see col 12/lines 45-54),

wherein the second set includes data to create messages (called "service specific data messages) (Humbleman: CALL.DTD which describes the interaction (message exchange), col 13/lines 9-17, the services available, wherein the CALL.DTD definition includes a rule set for generating method call or function call message (i.e. protocol), such as XML Remote Procedure Call (RPC) or XMLRPC messages col 13/lines 46-56).

Regarding claim 34, wherein the first set of XML-based code strings contain a reference to the second set of XML-based code strings (Humbleman: reference to application services col 15/lines 2-8).

Regarding claim 35, wherein the first set of XML-based code strings contain a reference to the second set of XML-based code strings (Humbleman: URL reference see col 14/lines 63-col 15/line 8).

Regarding claim 36, wherein the first set of XML-based code strings is stored on a first computer readable medium and the second set of XML-based code strings are stored on a second computer readable medium separate from the first computer-readable medium (Humbleman: subset of definition of the services are used by the controlling device to control the controlled device see col 12/lines 46-54, parts of the controlled device definition interface are request from the library see col 17/lines 56-col 8/line 3).

Regarding claim 37, wherein is the second set of XML-based code strings that define the services exposed by the device comprises URL(s) to a location(s) that host description(s) of the service(s) (Humbleman: description interface comprises URLs see col 14/lines 63-col 15/line 8, URL to portion of the description definition see col 21/lines 9-22, description definition includes services descriptions see col 13/lines 46-56).

Regarding claim 38, a device description written in an XML-based language to describe a controlled device (Humbleman: document definition XML based of the device see col 12/lines 35-54); and

a service description written in an XML-based language to describe a service supported by the controlled device (Humbleman: document definition describes the object and methods supported by the service that the device provides see col 12/lines 46-54);

the service description definition describes how to access a service at the controlled device (Humbleman: the INTERFACE-A.XML is used to determine how to communicate with a device for service by defining the message format for the service, col 13/line 1-8, and describing the services available col 13/46-56)

Regarding claim 39, wherein the device description is stored at a first location and the service description is stored at a second location remote from the first location, but accessible via a network (Humbleman: library accessible over the network see col 16/lines 38-58, device service description stored on controlled device see col 15/lines 39-49, part of the description definition may be available/accessible at the library see col 17/lines 56-col 8/line 3).

Regarding claim 40, wherein the device description contains a reference to the service description (Humbleman: hierarchical device interface definition including device description i.e. device attributes

and capabilities and further to control interface which contain references to device interface services such as video services sink for a specified control interface see col 21/lines 47-col 22/lines 39).

Regarding claim 41, wherein the device description contains at least one other device description nested therein (Humbleman: description definition is a hierarchical device interface definition including control interface description definition that further includes, i.e. “nested” description definitions see col 21/lines 47-col 23/line 3).

Regarding claim 42, a description, written in an XML-based language, that describes how to is remotely operate the computing device (Humbleman: XML based document definition describes the object and method of the device col 12/lines 35-54, said definition is used to remotely control, i.e. send command to the device see col 14/lines 20-42); and

description means, responsive to a description request received by the computing device on a network, for sending a description message based on the description that defines interaction via data messaging with the computing device over the network (Humbleman: create commands for sending to controlled device over the network see col 14/lines 35-62, sending control and command data to controlled device based on description definition e.g. capabilities see col 27/lines 63-col 28/line 12).

Regarding claim 43, this claim is substantially the same as method claim 29 where description includes a “device/service portion” of the definition associated with the controlled device, same rationale of rejection is applicable to this “device/service description” associated with the computing device.

Regarding claim 44, wherein the device description and the service description are located remotely from one another and separated by a network (Humbleman: part of the definition interface may be retrieved from the library see col 17/lines 56-col 18/line 3 which is located over the Internet see col 16/lines 38-58 or distributed see col 17/lines 15-25, service (e.g. functions) description fields that define services exposed by the controlled device located remotely from the controlled device but accessible over the network see col 20/lines 49-64).

Regarding claim 45, this claim is substantially the same as method claim 31 discussed above, same rationale of rejection is applicable.

Regarding claim 46, wherein the description comprises multiple descriptions that describe how to remotely operating multiple computing devices logically contained within the computing device (Humbleman: remotely controlling controlled devices using description software stored within see col 15/lines 34-49, description provides the capabilities and commands for communicating/controlling controlled device see col 14/lines 6-60).

Regarding claim 47, wherein the description is a first description written in an XML-based language that describes how to remotely operate another computing device, the second description being nested within the first description (Humbleman: definition including the capabilities of the controlled device used to remotely operate another device see col 14/lines 6-60, hierarchical structure definition, e.g. where service definition includes sub-descriptions, i.e. “nested” description e.g. utilities for controlling device specific interfaces and specific capabilities of the device see col 21/lines 47-col 23/lines 3).

Regarding claim 48, a computing device comprising:

- a memory (Humbleman: each device has definition stored locally therein see col 15/lines 44-49, blocks 52 and 58 of Fig. 15, data base, i.e. storage or memory device definition device XML based see col 12/lines 35-54);

- self-describing data stored in the memory and written in an XML-based language the self-describing data describing how to operate the computing device (Humbleman: data base stored object and method describe the methods and object of the device, i.e. “self describing data” see col 12/lines 35-54); and

- a processor coupled to the memory to submit the self-describing data to remote entity on a network (Humbleman: data retrievable, i.e. submitted by another device over the network see col 14/line 62-col 15/line 6, i.e. corresponding hardware resource for performing this retrieval, i.e. processor coupled to memory, and further transferring the definition document “self-describing data” between controlled device and controller device over the network see col 14/lines 20-34).

Regarding claim 49, this claim regarding the definition data “self-describing data” comprising a first/second data is substantially the same as “device portion” and “service portion” discussed on the method claim 29, the computer-readable media claim 33 having a “first/second set of XML-based code strings” discussed on claim 33, and data structure claim 38 having a “device/description” schema, same rationale of rejection is applicable.

Regarding claim 50, wherein the self-describing data comprises device data to describe attributes of the computing a device (Humpleman: device attributes see col 21/lines 46-62) and a universal resource locator(s) to a service(s) exposed by the computing device (Humpleman: URI see col 15/lines 2-8).

Regarding claim 51, multiple controlled devices configured to dynamically self-bootstrap onto the network (Humpleman: devices self configure at runtime with native functionalities, i.e. "self bootstrap" see col 16/lines 24-38),

individual controlled devices comprising a device description to describe attributes of the computing device and a service description to describe a service(s) exposed by the computing device (Humpleman: each device having definition stored therein for being controlled see col 15/lines 39-49, definition including description of the attributed of the controlled device see col 21/lines 47-62, and a description of the services or capabilities provided by the device see col 14/line 14-10 and col 13/lines 46-56, description of the object, methods and parameters supported see col 15/lines 39-49);

the device and service descriptions being written in an XML-based language (Humpleman: definition is an XML based document see col 12/lines 35-54); and

defining a messaging protocol (Humpleman: an XML messaging communication protocol for sending/receiving messages over the network col 15/lines 8-27, including a call definition includes a rule set for generating method call or function call message, e.g. XML Remote Procedure Call (RPC) or XMLRPC messages col 13/lines 46-56);

one or more user control points to initiate communication with the controlled devices over the network (Humpleman: definition describes the messages to be used to communicate with controlled device see col 13/lines 1-6, using a browser, i.e. control point, see col 11/line 61-col 12/line 5, definition used to communicate or send control commands to said device see col 14/lines 6-10, 20-27, 38-42, 55-60).

Regarding claim 52, wherein the device description and the service description for an associated controlled device are both a stored on the associated controlled device (Humpleman: definition is resident at controlled device see col 15/line 39-49, definition include attributes of the device see col 21/lines 46-62 and the service the devices supports see col 12/lines 46-54).

Regarding claim 53, this claim comprises the architecture comprising limitation(s) substantially the same as those discussed on claim 39, same rationale of rejection is applicable.

Regarding claim 54, this claim includes the apparatus comprising the means for performing the storing and making functions discussed on claim 32, same rationale of rejection is applicable.

Regarding claim 55, wherein the storing means stores multiple definitions of multiple controlled devices (Humbleman: central library see col 16/lines 62-col 17/line 1, or distributes where multiple devices are registered on each library col 17/lines 15-29).

Regarding claim 56, this claim includes the apparatus comprising the description definition comprising a first/second set of strings discussed on claim 33, same rationale of rejection is applicable.

Regarding claim 57, wherein the definition contains multiple device descriptions each describing a different set of attributes of the controlled device (Humbleman: each device (controller or controlled) contains an interface definition see col 15/lines 39-49, device interface definition includes multiple device description fields each describing a different set of capabilities, type, communication and control interfaces, i.e. attributes see col 21/lines 47-col 22/line 35).

Regarding claims 58-60, API interface methods and queries, col 14/lines 20-34, notifications col 17/lines 15-29), service control protocol definition is XML based, col 13/lines 31-35.

Regarding claim 61-62, service description protocol comprises access description (called "service access protocol description") (col 10/lines 50-63, col 12/lines 11-24, and col 13/lines 31-45), automatically configurable (col 10/lines 50-63).

Response to argument

4. It is argued that prior art does not teach claim limitations as added, in substance, where the definition includes a protocol based messaging exchange (called "service control protocol definition"), that define the (interface) services through which the messages are communicated, the definition including data to create the messages and how to access the services supported by the device through the messages.

In response to the above-mentioned argument, the claimed term service control protocol definition has been interpreted in light of the specification broadly speaking a defining or describing a protocol based message exchange, as described by the specs p. 44, lines 14-17, p. 43, lines 14-18).

Humpleman teaches an application interface language (*XML commands*) is utilized to allow different devices to control other devices ("device-to-device control"), or where servers control devices over the network ("device-to-server), including control for a desired service col 10/lines 50-63, such interfaces (API) extensions use an XML-based interface, to provide overall interoperability col 12/lines 11-24, and provide for communication between various devices on the network using XML, wherein code for Service generates method calls to an API, for inter-device communication, wherein the *XML method calls (messages)* are sent to a service over the network, the extensions are implemented using interface blocks, Fig. 15, col 13/lines 31-45.

A first device wishing to control the second device in the network, would use the *INTERFACE-A.XML* document definition to query the capabilities and API interface methods of the second device A, allowing the first device to control the second device utilizing XML remote procedure calls (*XMLRPC*), (col 14/lines 20-34)

The definitions of API extensions for the services of the network device (e.g. Service A) provides a (block 52) comprehensive definition of CE objects and their respective methods to describe CE devices in a XML (i.e. termed XCE definition), (block 54) a API definition in XML for all devices 14, designated as an interface data type definition Interface.DTD. col 12/lines 35-45, (block 60) provides a language definition for making XML form method (command) calls to remote API services or devices such as the API for Service A (i.e. a document type definition). Method Request CALL.DTD, which describes interaction with objects on the network (col 13/9-17), document definitions INTERFACE.DTD. & CALL.DTD are used to describe the services available (namely called INTERFACE.XML), the CALL.DTD definition includes a rule set for generating method call or function call message, e.g. as XML Remote Procedure Call (RPC), i.e. a protocol, or XMLRPC messages, the definition describes an output interface of a controller service, col 13/lines 46-56.

An INTERFACE-A.XML is formed from a subset of the XCE definition for Service, and the interface data type INTERFACE.DTD to create an XML form document. The document INTERFACE-A.XML describes the objects and methods supported by the Service A according to the document type definition INTERFACE.DTD for Service A, col 12/lines 46-54. The INTERFACE-A.XML is used to determine how to communicate with a device for service by defining the message format for the service, col 13/line 1-8, and describes the services available col 13/lines 46-56.

An XML protocol communication stack at the API level on each device is used for sending (68) and receiving (70) messages over the network. The XCE definition and the XML definition of a method call, namely called the document type definition CALL.DTD and document type definition INTERFACE.DTD are used to create the communication stack (68 & 70 respectively) col 15/lines 8-27.

5. Applicant's arguments filed 8/19/04 have been fully considered but not found persuasive.
6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prieto, B. whose telephone number is (703) 305-0750. The Examiner can normally be reached on Monday-Friday from 6:00 to 3:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, Jack B. Harvey can be reached on (703) 305-9705. The central fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
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or faxed to the Central Fax Office:

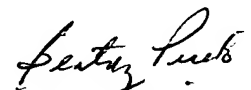
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(703) 306-5631 for TC 2100 Customer Service Office.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Fourth Floor (Receptionist), further ensuring that a receipt is provided stamped "TC 2100".


B. Prieto
Patent Examiner
December 16, 2004


Patent Examiner